August 29, 2014

To: Executive Board

Subject: **Foothill Transit Comprehensive Operational Analysis (COA) Update**

Recommendation

Receive and file the Foothill Transit COA update.

Analysis

On October 26, 2012, the Executive Board authorized the Executive Director to enter into an agreement with Nelson\Nygaard Consulting Associates to complete a COA for Foothill Transit. That work is currently underway and this report summarizes the work completed to date.

The Foothill Transit COA is composed of four main elements: an assessment of the service area; analysis of existing ridership; organizational and system productivity analysis; and needs assessment and development of preferred scenarios and service plans. The first three tasks are currently underway. Route profiles have been completed and onboard survey results are still being tabulated and analyzed. Nelson\Nygaard staff will be present at the August 29th Executive Board Meeting to update the Board with summary results.

Service Area Element

The service area profile consists of a review of major, long-range planning documents in the region. These documents serve to meet state mandated transportation goals and provide a vision of what the transportation and land use programs necessary for a high quality of life can look like; these documents are the backdrop for the service environment in which Foothill Transit operates. A review of these major policy documents ensures that the product of this COA is in line with existing regional goals, and that any product implemented from this COA has a tangible and positive impact on the quality of transit services available to the public.

As part of the service area profile, the COA is also determining what the entire transit network in the region looks like. Just as auto drivers will choose the freeway that provides the most direct and least congested route to their destination, transit riders also make the same decision in terms of transit services. Regardless of which agency provides the service, riders will choose the route that delivers them to their destination in the most expedient manner. To date, the COA has uncovered that there is a lot of overlap between the service provided by Foothill Transit and the services provided by municipal shuttles. In many instances, several different agency buses dovetail and run on the same road as Foothill Transit for a mile or two at a time. This duplication in service has led to an inefficient allocation of resources which prevents the expansion of service to new areas and desiring populations. Some cities have also requested

additional service in new areas of their city which Foothill Transit does not currently serve, in addition to better coordination of schedules to ensure seamless connection between systems.

The final part of this element investigates the different travel paths in the region. Combined with population and employment maps, the location of high trip generators and the most visited destinations in the region can be determined. The top travel pairs in the service area are determined using computer models provided by the Southern California Association of Governments.

Top Travel Pairs in Service Area	Daily trips
South Pasadena/San Marino & Pasadena	47,795
Pasadena & East Pasadena	46,612
West El Monte/Temple City & South El Monte/El Monte	36,811
South Pomona & North Pomona	36,330
Rowland Heights & Avocado Heights/Industry	33,826
Vincent/Covina & Azusa/Citrus	33,134
Upland & Montclair	32,397
West Puente/La Puente/Valinda & Baldwin Park	32,098
West Covina & Baldwin Park	31,009
West Covina & Vincent/Covina	30,773

The next stage will include identifying the actual route paths taken between these destinations using GPS data from cellular devices.

Existing Ridership Element

A major portion of this task is understanding the demographics of the service area. In the COA, the service area is defined as all JPA cities as well as a ½ mile radius around any bus stop beyond a JPA city boundary. In order to provide a relevant and meaningful service it is vitally important to know who resides within the service area. Employment and population densities and types, zoning policies and land uses, and the prevalence and cost of non-bus transportation options all play a role in informing and determining what a successful bus transit system should look like. The following table lists top-level population data for our service area:

Population Group	% of Total Service Area population
Minority (non-white)	76.1%
Income below 150% of the federal poverty level	25.5%
Persons that identify as speaking English “less than very well”	16.3%
Seniors 65 or Older	11.8%
Persons with Disabilities	9.4%

In order to further understand population demographics at a route-by-route and block-by-block basis, surveys were conducted onboard the bus and via home telephone

during the month of May. Over 13,000 responses were collected; as a comparison national Gallup polls typical have a sample size of approximately 1,000 people. The results from the Foothill Transit surveys are still in the process of being inputted; further analysis will begin once all responses have been inputted into the database. A separate, online survey was conducted to determine specific ways in which Foothill Transit could better provide operating service as well as streamlined fares. This survey is available at www.foothilltransitstudy.com and will be open for the life of the COA.

Organizational and System Productivity Element

The bread and butter in any COA is the task of determining how efficient a system is operating, and the ways in which that system can be made more efficient and effective. As part of the COA, a five-year historical trend analysis is currently investigating how several key measures (passenger trips, expense per vehicle hour, expense per passenger, etc.) have tracked systemwide over the years. This will give a gauge on how efficiently the agency is running. Generally, boardings during this time have seen a continual dip while route productivity and operating efficiency have increased (due to less hours being operated). Since the November 2013 schedule change and service additions implemented, boardings have increased more than three percent over the previous year, reversing many of the negative ridership trends.

	FY08/09	FY09/10	FY10/11	FY11/12	FY12/13	Percent Change (FY08/09 – 12/13)
Passenger Trips	14,848,216	14,436,713	13,985,056	13,909,627	14,079,592	-5.18%
Vehicle Service Hours	765,533	746,283	671,178	671,603	689,585	-9.92%
Passengers per Vehicle Service Hour	19.4	19.3	20.8	20.7	20.4	5.24%
Vehicle Service Miles	11,457,021	11,276,335	9,946,290	9,957,923	10,187,350	-11.08%
Passengers per Vehicle Service Mile	1.30	1.28	1.41	1.40	1.38	6.64%
Total Operating Expense	$66,890,002	$63,513,225	$59,486,550	$61,654,544	$63,175,044	-5.55%
Operating Expense per Vehicle Service Hour	$87.38	$85.11	$88.63	$91.80	$91.61	4.85%
Operating Expense per Passenger Trip	$4.50	$4.40	$4.25	$4.43	$4.49	-0.40%
Operating Expense per Vehicle Service Mile	$5.84	$5.63	$5.98	$6.19	$6.20	6.22%

Budget Impact

There is no financial impact associated with this report.

Sincerely,

Austin Lee
Planning Manager

Doran J. Barnes
Executive Director